

WHAT IS CLAIMED IS:

1. A method of forming a borderless contact structure, the method comprising:
 - selectively etching a predetermined portion of a semiconductor substrate to form a trench defining an active region having a top surface;
 - forming a device isolation region in the trench, the device isolation region having a protrusion which is higher in level than the top surface of the active region;
 - forming a gate pattern on the active region;
 - forming a lightly doped drain (LDD) region in the active region on both sides of the gate pattern;
 - forming an insulating layer for forming a spacer on the resultant structure including the LDD region;
 - anisotropic etching the insulating layer for forming a spacer to form a gate spacer on a sidewall of the gate pattern and to form an etch stop spacer on the sidewall of the protrusion of the device isolation region;
 - forming an impurity diffusion region in the active region;
 - sequentially forming an etch stop layer and an interlayer insulating layer over the resultant structure,
 - wherein the insulating layer for forming a spacer is formed of a material having an etching selectivity with respect to the interlayer insulating layer; and
 - successively patterning the interlayer insulating layer and the etch stop layer to form a contact hole exposing at least a portion of the impurity diffusion region.
2. The method according to claim 1, wherein the etch stop spacer is made of silicon nitride or silicon oxynitride.
3. The method according to claim 1, wherein the etch stop layer is made of silicon nitride or silicon oxynitride.
4. The method according to claim 1, further comprising:
 - forming a contact plug in the contact hole; and
 - forming an interconnection line overlying the contact plug.

5. The method according to claim 1, wherein the contact hole exposes both the impurity diffusion region and the portion of the etch stop spacer adjacent to the exposed impurity diffusion region.

6. The method according to claim 1, wherein the etch stop spacer is partially etched.